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THE RELATIONSHIP BETWEEN LEADER-MEMBER EXCHANGE AND JOB
SATISFACTION: MEASURING LMX QUALITY AND JOB SATISFACTION OF
SUPERVISORS AND SUBORDINATES

A thesis submitted in partial fulfillment
of the requirement for the degree of
Master of Science

By

COLLEEN MARIE HAYDEN
B.A., Wright State University, 2007

2011
Wright State University

WRIGHT STATE UNIVERSITY
SCHOOL OF GRADUATE STUDIES

March 15, 2011

I HEREBY RECOMMEND THAT THE THESIS PREPARED
UNDER MY SUPERVISION BY Colleen Marie Hayden ENTITLED
The Relationship Between Leader-Member Exchange and Job
Satisfaction: Measuring LMX Quality and Job Satisfaction of
Supervisors and Subordinates BE ACCEPTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE
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ABSTRACT

Hayden, Colleen Marie. M.S., Department of Educational Leadership, Wright State University, 2011. The Relationship Between Leader-Member Exchange and Job Satisfaction: Measuring LMX Quality and Job Satisfaction of Supervisors and Subordinates.

There is an abundance of literature focusing on the relationship between leader-member exchange (LMX) quality and job satisfaction of subordinates. The purpose of this study was to further examine the relationship between the leader-member exchange (LMX) quality and job satisfaction of subordinates as well as introduce the analysis of this relationship for supervisors into the literature. This non-experimental, correlational study focused on the analysis of 22 pairs of supervisor and subordinate LMX and job satisfaction survey responses. The data were analyzed to determine the relationship between: (1) subordinate LMX quality and job satisfaction; (2) supervisor LMX quality and job satisfaction; (3) subordinate and supervisor LMX quality; and (4) subordinate and supervisor job satisfaction. The analyses of these research hypotheses concluded that there is a relationship between LMX quality and job satisfaction in all four conditions.

TABLE OF CONTENTS

	Page
CHAPTERS	
I. INTRODUCTION.....	1
Introduction.....	1
Statement of the Problem.....	2
Assumptions.....	3
General Research Hypotheses.....	3
Significance of the Study.....	4
Scope.....	4
Definitions and Operational Terms.....	4
Summary.....	5
II. REVIEW OF THE LITERATURE.....	7
Quality of LMX Relationships.....	7
Job Satisfaction.....	10
Impact of LMX Quality.....	12
Summary.....	14
III. METHODOLOGY AND DESIGN.....	15
Research Design.....	15
Population and Sample.....	15

Instrumentation.....	15
Data Collection.....	17
Statistical Treatment.....	18
Summary.....	19
IV. RESULTS.....	20
Demographic Descriptive Statistics.....	20
Results of Testing the Research Hypotheses.....	20
Summary of results of research question 1.....	20
Summary of results of research question 2.....	24
Summary of results of research question 3.....	28
Summary of results of research question 4.....	31
Summary.....	35
V. CONCLUSIONS, AND IMPLICATIONS, AND SUMMARY.....	36
Conclusions.....	36
Limitations.....	40
Implications.....	40
Recommendation 1.....	40
Recommendation 2.....	41
Recommendation 3.....	41
Summary.....	41
REFERENCES.....	43
APPENDICES.....	50
A. LMX-7 Short Form.....	50

B. Permission to use LMX-7 Short Form.....	51
C. Job Satisfaction Survey.....	52
D. Permission to use Job Satisfaction Survey	54
E. Cover letter to supervisors.....	55
F. Cover letter to subordinates.....	56

LIST OF FIGURES

Figure	Page
1. Scatterplot of subordinate LMX and JSS responses.....	24
2. Scatterplot of supervisor LMX and JSS responses.....	28
3. Scatterplot of subordinate and supervisor LMX responses.....	31
4. Scatterplot of subordinate and supervisor JSS responses.....	35

LIST OF TABLES

Table	Page
1. Job Satisfaction Facets.....	17
2. Non-statistical Comparison of Subordinate LMX and JSS Responses.....	22
3. Subordinate LMX and JSS Responses.....	23
4. Non-statistical Comparison of Supervisor LMX and JSS Responses.....	26
5. Supervisor LMX and JSS Responses.....	27
6. Data Ordered by LMX Quality.....	30
7. Data Ordered by Level of Job Satisfaction.....	33
8. Percentage of Satisfied and Dissatisfied/Ambivalent for JSS facets.....	34

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I. INTRODUCTION

Leader-member exchange (LMX) theory was developed in the 1970s following the establishment of the Vertical Dyad Linkage (VDL) Approach (Dansereau, Graen, & Haga, 1975), which focused on leadership being a relationship between a superior and a member or subordinate. The VDL approach laid the foundation for the development of LMX, focusing on leadership as influence without formal authority (Dansereau et al., 1975). Prior to VDL and LMX, leadership had been seen traditionally as an action in which a superior would behave basically the same way towards all subordinates. LMX theory shifted away from this traditional notion and instead defined leadership as the individual relationship between a leader and each of his/her employees (Graen, 1976). In focusing emphasis on the different relationships that supervisors develop with each of their subordinates, the LMX theory has become an important tool in assessing the impact supervisor-subordinate relationships have on work units and organizational success (Graen, Novak, & Sommerkamp, 1982; Vecchio, Griffeth, & Hom, 1986).

Subordinate job satisfaction has been linked to high-quality LMX relationships and is the most frequently studied attitudinal correlation (Graen, 1976; Gerstner & Day, 1997; Stringer, 2006; Mardanov, Heischmidt, & Henson, 2008; Erdogan & Liden, 2002). High employee job satisfaction ratings lead to intrinsic motivation and lower turnover rates, which are critical for organizational success (Mardanov et al., 2008). Job satisfaction is also related both to the task domain and leadership domain. When one

domain is unable to fulfill the needs of the employee, the other can fill that void. For example, if a task is repetitive it may not provide motivation for an employee to have satisfaction with his/her job. In this case, the leader might focus particular attention on the relationship he/she has with the employee in order to fulfill the employee's need for motivation and job satisfaction. Likened to Mardanov and his colleagues' assertions (2008), the leadership domain can have a great impact on the subordinates' commitment and involvement not only to their own professional growth but also to the success of their organizational unit (Graen et al., 1982). Recent LMX research suggests that when employees lack motivation at work, the LMX relationship with their supervisor becomes even more critical for success (Harris, Wheeler, & Kacmar, 2009).

Statement of the Problem

The relationship between LMX quality and subordinate job satisfaction has been the topic of a great deal of previous research (Graen, 1976; Gerstner & Day, 1997; Stringer, 2006; Mardanov et al., 2008). A meta-analysis by Gerstner and Day (1997) offered further credence to LMX research studies that had consistently correlated subordinates' perceptions of LMX quality with their job satisfaction. Just as there is an abundance of research relating LMX quality to subordinate satisfaction, there is a comparable dearth in research related both to job satisfaction and the impact of LMX quality for supervisors. If high-quality LMX relationships are linked to job satisfaction for subordinates, the same may be true for those in leadership roles. This is a non-traditional focus of research regarding job satisfaction, specifically as it relates to the quality of the LMX relationship. The results of this study will add the variable of

supervisor job satisfaction both to LMX and job satisfaction literature that focuses predominately on the subordinate.

Assumptions

The following assumptions were adopted for this study: (1) supervisors and subordinates will respond truthfully on both the LMX and Job Satisfaction Survey (JSS) questionnaires; (2) subordinates will perceive no threat of repercussion for their participation; and (3) the reliability and validity for the questionnaires being used will hold for the sample population being studied.

General Research Hypotheses

Research question 1: Is there a relationship between LMX quality and job satisfaction for subordinates?

Research question 2: Is there a relationship between LMX quality and job satisfaction for supervisors?

Research question 3: Is there a relationship between subordinate and supervisor LMX?

Research question 4: Is there a relationship between subordinate and supervisor job satisfaction?

Null hypothesis: There is no relationship between the LMX quality and job satisfaction of subordinates or supervisors.

Hypothesis 1: There is a relationship between LMX quality and subordinate job satisfaction.

Hypothesis 2: There is a relationship between LMX quality and supervisor job satisfaction.

Hypothesis 3: There is a relationship between subordinate LMX and supervisor LMX.

Hypothesis 4: There is a relationship between subordinate job satisfaction and supervisor job satisfaction.

Significance of the Study

This study introduces the variable of supervisor job satisfaction to both LMX and job satisfaction research. This study is significant because there is a dearth of research related to (a) supervisor job satisfaction and (b) the relationship between LMX quality and supervisor job satisfaction. This study also offers further credibility to past research that correlates the quality of the LMX relationship to subordinate job satisfaction.

Scope

The scope of this study is limited to staff currently employed at the author's post-secondary educational institution of employment. The institution in this study is a large suburban Midwestern university. Participants work in departments/colleges that elect to participate. A majority of the colleges were represented in this study. The results of this study cannot be generalized to other post-secondary institutions.

Definitions and Operational Terms

Extrinsic motivation: supervisory leadership related to the leader's attitude towards their members (Mardanov et al., 2008)

Intrinsic motivation: an employee's motivation related to his/her attitude towards work, their leader, and their organization (Mardanov et al., 2008)

High-quality LMX relationship: exchanges which are supportive with high trust, including formal/informal rewards shared between a supervisor and his/her subordinates (Dienesch & Liden, 1986)

Job satisfaction: an affective, emotional response to a job or to the various facets of a job (Locke, 1976; Smith, Kendell, & Hulin, 1969)

Leader: interchangeable term for ‘supervisor’ in relation to LMX theory

Leader-member exchange (LMX): the relationship a supervisor (leader) has with each of their individual employees (members) (Graen, 1976)

Leadership domain: inclusive of the exchange relationship between the subordinate and their supervisor (Graen et al., 1982)

Low-quality LMX relationship: exchanges which are exclusively centered on the fulfillment of the employment contract (Liden, Sparrowe, & Wayne, 1997)

Member: interchangeable term for both ‘subordinate’ and ‘employee’ in relation to LMX theory

Vertical Dyad Linkage (VDL) Approach: reflects the development connecting subordinate and supervisor into a distinct relationship within an organizational unit (Dansereau et al., 1975)

Summary

LMX theory focuses on the quality of the individual relationships that a supervisor has with his/her subordinates (Graen, 1976), as well as the impact that quality has on subordinate job satisfaction (e.g., Gerstner & Day, 1997; Stringer, 2006; Mardanov et al., 2008). There is an abundance of literature correlating high-quality LMX relationships with subordinate job satisfaction (cf. Gerstner & Day, 1997). However, there is a comparable dearth in the literature related to supervisor satisfaction, specifically as it would correlate to LMX quality. This study adds further credibility to the preponderance of LMX and job satisfaction research that focuses exclusively on the

subordinate. However, the key significance of this study is the introduction to the research of not only supervisor job satisfaction but also of its relationship with LMX quality.

II. REVIEW OF THE LITERATURE

In response to organizational role and social exchange theories, Graen (1976) developed the LMX theory that focused exclusively on the relationship that is formed between a supervisor and each of his/her subordinates. The quality of the LMX relationship has been the focus of several research studies, including those that correlate LMX quality with subordinate job satisfaction (cf. Cogliser, Schriesheim, Scandura, & Gardner, 2009). LMX relationships are studied in a dyadic approach because effective leadership relationships develop between ‘partners’ in an organization (e.g., supervisors and subordinates; Graen & Uhl-Bien, 1995). These LMX relationships are exclusively grounded in the social exchanges between supervisors and subordinates. Blau (1964) asserted that as these social exchanges increase, the quality of the LMX relationship will likely become stronger, resulting in a high-quality leader-member exchange.

Quality of LMX Relationships

LMX relationships are categorized into two levels of quality—low and high. Low-quality LMX relationships, sometimes referred to as out-group exchanges (Dansereau et al., 1975), are defined as exchanges explicitly centered on the fulfillment of the employment contract (Liden et al., 1997). Conversely, high-quality LMX relationships, or in-group exchanges (Dansereau et al., 1975), are defined as exchanges between a supervisor and his/her subordinates which are supportive, have mutual respect, high trust, and share formal/informal rewards (Dienesch & Liden, 1986). Indicators of a

high-quality relationship include forms of social currency such as sharing advice, information and social support equally between subordinate and supervisor (Blau, 1964). The distinction is that high-quality LMX is rooted in social exchanges, whereas low-quality LMX is rooted in economic exchanges that solely focus on the employment contract such as completing a task for pay (Krackhardt, 1990; Liden et al., 1997; Sparrowe & Liden, 1997).

By focusing the LMX relationship solely around task-related behaviors, the LMX theory was originally established as a unidimensional construct (Graen, 1976). More recent research has brought attention to the multidimensionality of the LMX, in that it includes not only the task-related behaviors but also the loyalty and affection that are ‘exchanged’ between a supervisor and his/her subordinates (Dienesch & Liden, 1986; Liden & Maslyn, 1998).

Though high-quality LMX relationships are ideal, supervisors will only be able to develop high-quality relationships with a key number of subordinates due to resource and time constraints (Dansereau et al., 1975; Graen, 1976). Both the VDL and LMX models suggest that the supervisor will establish high-quality exchanges with those employees who are observed to have high performance, competency, and ability early in the development of the relationship (Dansereau et al., 1975; Graen & Scandura, 1987).

Historically, it has been common practice to measure the quality of the LMX relationship solely from the subordinate’s perspective (Scandura & Schriesheim, 1994). More recent studies, however, have found that the LMX scores of both supervisors and subordinates should be analyzed as a dyadic relationship in order to have a more accurate model for correlating LMX quality to job satisfaction (Cogliser et al., 2009; Greguras &

Ford, 2006). Cogliser and colleagues (2009) asserted that both the leader and member in the dyad must have a comparable perception of their relationship for an association to be correlated between LMX quality and employee job satisfaction.

Though there is merit in the argument that LMX scores must be analyzed as a dyadic relationship, a recent study by Zhou and Schriesheim (2009) focused on the significance of differing interpretations of LMX survey questions, potentially leading to inconclusive results. Furthermore, Gerstner and Day (1997) suggested that the LMX quality is more reliable from the member's perspective because leaders tend to respond to the LMX questionnaire through a more complex, multidimensional construct. Graen and Uhl-Bien (1995) asserted that the LMX relationship should be viewed as objective, not perceptive, in which case both the supervisor and subordinate responses of the LMX survey should converge moderately well. This however has not been consistent in LMX research, leading researchers such as Zhou and Schriesheim (2009; 2010) to investigate further the impact that differing perceptions of the exchange relationship have on the correlations between supervisor and subordinate LMX responses.

Another confounding variable that may relate to the poor convergence of subordinate and supervisor LMX responses is the idea of self-fulfilling prophecies (Merton, 1948). Self-fulfilling prophecies can be seen in the work place as both the leader (supervisor) and the member (subordinate) develop expectations of one another and begin to act on these expectations early in the formation of their dyadic LMX relationship (Hollander & Offermann, 1990; Jablin, 1987). Liden and colleagues (1993) found that expectations of either the leader or the member correlated with LMX results. Perceived similarity and affection for one another are additional confounding variables when

correlating LMX responses. As with the self-fulfilling prophecy, research documented that a subordinate or a supervisor who notices similarities in personality and attitudes with his/her supervisor or subordinates is more likely to have an enhanced relationship (Byrne, 1971; Dienesch & Liden, 1986).

Concerns with perceptions and the influence of the self-fulfilling prophecy have led researchers to reexamine the idea of creating two LMX survey constructs: one for the supervisor and one for the subordinate (Brower, Schoorman, & Tan, 2000). Gregarus and Ford (2006) developed and validated a supervisor LMX construct (SLMX-MDM), focusing on the multidimensional manner in which the relationship with his/her subordinates is assessed. The results of the study by Gregarus and Ford (2006) offer further credibility to the strand of LMX research focused on the impact of subordinate and supervisor perceptions on the correlations between LMX responses (cf. Zhou & Schriesheim 2010).

Job Satisfaction

There is literature that defines job satisfaction as an affective, emotional response to a job or to the various facets of a job (Locke, 1976; Smith, Kendall, & Hulin, 1969). Smith and colleagues (1969) asserted that job satisfaction derives from an individual comparing his/her current job facets to his/her frame of reference. Job satisfaction can be impacted by: (a) the difference between what the job offers and what the individual expected; (b) the degree to which the job fulfills an individual's needs; or (c) the degree to which the job fulfills an individual's wants or desires (Locke, 1976).

During the 1960s and 1970s, researchers focused on job satisfaction as it related to the employee's physical and psychological fulfillment, such as pay (Porter, 1962;

Wolfe, 1970). However, there has been a shift in research during recent decades to study job satisfaction through an attitudinal perspective. More specifically, recent research is focusing attention away from the fulfillment of physical needs to the psychological processes that influence satisfaction (Spector, 1997). The literature related to the attitudinal perspective has negatively correlated job satisfaction with turnover, withdrawal intention, and absenteeism (Hom, Katerberg, & Hulin, 1979).

Many instruments have been created to measure job satisfaction (e.g., Job Descriptive Index; Minnesota Satisfaction Questionnaire; Job Diagnostic Survey). Spector began creating the Job Satisfaction Survey (JSS) in the 1980's in response to the need for a scale to assess job satisfaction in human service organizations (Spector, 1985). Based on Spector's review of previous job satisfaction literature nine facets were selected for inclusion in this scale. In addition to human service organizations, this scale is designed to assess job satisfaction in public and nonprofit sector organizations (Spector, 1985). The validity of this instrument has been supported when JSS results are compared to another job satisfaction scale's results (e.g., Job Description Index; Smith et al., 1969) for the same group of employees (Spector, 1997).

Though there is an abundance of literature related to subordinate job satisfaction, there is a scarcity related to supervisor job satisfaction. Of the minimal research available, Burke and Fiksenbaum (2009) discussed the internal (intrinsic) and external (extrinsic) motivators for managerial job satisfaction. Supervisors who have a balance of intrinsic and extrinsic work motivation have greater job satisfaction due to the challenge, meaning, and rewards from their work (Hewlett & Luce, 2006). Those supervisors who are motivated solely by external motivators tend to report lower levels of job satisfaction

(Deci, Koestner, & Ryan, 1999; Deci & Ryan, 1985, 2000; Ryan & Deci, 2000; Srivastava, Locke, & Bartol, 2001).

Impact of LMX Quality

The relationship between LMX quality and subordinate job performance, turnover intention, and job satisfaction has been at the center of extensive LMX research (cf. Harris et al., 2009). Due to the amount of empirical evidence correlating LMX quality to job performance, turnover intention, and job satisfaction, researchers have identified a subordinate's relationship with his/her supervisor to be key (Liden et al., 1997). A meta-analysis by Gerstner and Day (1997) indicated that high-quality LMX relationships are significantly related to higher levels of job satisfaction, organizational commitment and role clarity for subordinates. An important finding from the Gerstner and Day (1997) meta-analysis was that correlations between LMX and job satisfaction were found for subordinates. The meta-analysis did not include studies correlating LMX quality and job satisfaction for supervisor.

Subordinates in a lower-quality LMX relationship tend to feel more negatively about their jobs, are tasked with mundane assignments, have fewer opportunities to advance, and receive less supervisory support (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995; Maslyn & Uhl-Bien, 2001; Vecchio, 1986). Vecchio (1995) concluded that there was a direct relationship between subordinates in a low-quality LMX relationship and job dissatisfaction. If a subordinate merely perceives that he/she is a member of the out-group (less favorable towards the supervisor), unheeded feelings of anxiety may negatively influence his/her job satisfaction and organizational commitment (Gerstner & Day, 1997; Van Breukelen, Konst, & Van Der Vlist, 2002).

Several decades before the development of the LMX theory, the Hawthorne Studies, conducted by Elton Mayo and colleagues, linked job satisfaction with the quality of supervision and employee-management relations (Locke, 1976). Locke (1976) calculated that by 1972, job satisfaction had been the topic of nearly 3,350 research articles. Studies about job satisfaction have increased steadily since 1972 as researchers have become more interested in the topic (Graen et al., 1982; Harris et al., 2009; Mardanov et al., 2008).

A high employee job satisfaction rating has been correlated to positive organizational citizenship behavior (OCB), which includes punctuality, altruism, and compliance (Spector, 1997). High-quality LMX relationships have also been negatively correlated to employee turnover (Graen et al., 1982) and turnover intention (Vecchio & Gobdel, 1984). An organization's leaders, followers, and work units all benefit from high-quality LMXs, thus leading to greater organizational effectiveness and success (Graen & Uhl-Bien, 1995).

Dansereau and colleagues (1975) asserted that leadership (influence without formal authority) and supervision (influence based solely on formal authority) are two distinctively different approaches a leader may take in developing a relationship with subordinates, with the leadership approach producing a high-quality LMX relationship. The impact that high-quality LMX relationships have on individual and organizational success supports Dansereau and colleagues' assertions (Graen & Uhl-Bien, 1995). There is emerging research focusing on the connection between leadership and organizational performance, which is inevitably impacted by the satisfaction and performance of those individuals within the organization (Muijs, Harris, Lumby, Morrison, & Sood, 2006).

Organizations can utilize leadership development to train those in formal and informal leadership role (the basic distinction between leadership and management training) in order to enable their employees to work together in more meaningful ways throughout the organization (Keys & Wolfe, 1988). Additionally and directly related to the foundation of LMX theory, leadership development focuses entirely on the social capital in an organization: building relationships between individuals to enhance cooperation and exchange of resources (Tsai & Ghoshal, 1998; Bouty, 2000).

Summary

Since the development of LMX theory by Graen (1976), the quality of the LMX relationship between a supervisor and each of his/her subordinates has been at the center of numerous research studies. In particular, extensive LMX research has consistently supported the correlation between LMX quality and subordinate job satisfaction (Gerstner & Day, 1997). Though there is an abundance of literature related to this correlation, there is also a comparable dearth in the literature related to the impact of LMX quality on supervisors, particularly their job satisfaction. This study will focus on the impact of LMX quality on subordinate and supervisor job satisfaction, offering further credence to the literature for the former and introducing research to the literature for the latter.

III. METHODOLOGY AND DESIGN

Research Design

This is a non-experimental, correlational study that assesses the relationship between the quality of LMX relationships and job satisfaction. The results of this study establish the degree to which there is a relationship, if any, between these two variables. The results of this study cannot be used to establish causation.

Population and Sample

The sampling method used for this study was a convenience sampling. The population studied was the staff of a large suburban Midwestern post-secondary educational institution. A supervisor and his/her subordinate were paired and surveyed. The sample represented the majority of the colleges at the institution.

Instrumentation

The LMX-7 Short Form was developed by Graen and Uhl-Bien in 1995 (see Appendix A). This form utilizes a 5-point Likert scale. For example, when the participant is asked, “How well does your leader (follower) recognize your potential?” his/her answer will range from “Not at all (1)” to “Fully (5).” The scores of each LMX-7 question must be totaled; the total indicates the quality of the relationship: 30-35 = very high; 25-29 = high; 20-24 = moderate; 15-19 = low; and 7-14 = very low (Graen & Uhl-Bien, 1995).

The LMX-7 has an internal consistency reliability alpha of .92 (Aditya, 2004), which is considered highly reliable. Gerstner and Day (1997) stated that the LMX-7 had a

tendency to produce a higher correlation with job satisfaction as compared to previous versions of the LMX survey (cf. LMX-6). There is debate in the literature regarding the validity of the LMX-7 form. Stringer (2006) states that the form is valid due to extensive pre-tests of the LMX-7 form. In contrast, Schriesheim and colleagues (2001) argue that due to the different, previous versions of the LMX survey (e.g., LMX-6, LMX-7 Short Form) the results cannot be directly compared in relation to validity.

The Job Satisfaction Survey (JSS) was copyrighted by Paul E. Spector in 1994 (see Appendix C). The JSS has 36 items, categorized into nine facets. Table 1 contains each facet and related survey items. This form utilizes a 6-point Likert scale. The answers for all questions range from “Disagree very much (1)” to “Agree very much (6).” The total reliability alpha for all nine facets is .91 (Spector, 1985). To interpret the results of the 36-item JSS questionnaire, all of the scores must be totaled; the total indicates whether the participant is satisfied (144 to 216), dissatisfied (36 to 108), or ambivalent (108 to 144; Spector, 1997).

Table 1

Job Satisfaction Facets

Facet	JSS Item Number
Pay	1, 10r, 19r, 28
Promotion	2r, 11, 20, 33
Supervision	3, 12r, 21r, 30
Fringe Benefits	4r, 13, 22, 29r
Contingent Rewards	5, 14r, 23r, 32r
Operating Conditions	6r, 15, 24r, 31r
Coworkers	7, 16r, 25, 34r
Nature of Work	8r, 17, 27, 35
Communication	9, 18r, 26r, 36r

Note. Items followed by 'r' are reverse scored (i.e., if a rating of 2 is selected, it is scored as a 5)

The JSS has a test-retest reliability of .71 (Spector, 1985). The validity of the JSS is supported when the results are compared to another job satisfaction scale's results (e.g., Job Description Index; Smith, Kendell, & Hulin, 1969) of the same group of employees (Spector, 1997). Correlations between these two scales range from .61 for employees to .80 for supervisors (Spector, 1997).

Data Collection

The author emailed various department staff members (< 50 departments) in the institution through the use of the campus directory and the Unclassified Staff Advisory Committee membership list serve. Of those emailed, 22 pairs of supervisors and subordinates agreed to participate, for a total of 44 participants. Approximately twenty departments participated, resulting in a representative sample of the population. Each participant completed the LMX-7 Short Form to assess the quality of the relationship

with their subordinates/supervisor. Each participant also completed the JSS to assess whether they were satisfied, dissatisfied, or ambivalent with their jobs.

Each of the participants completed the LMX-7 and JSS surveys via the online questionnaire tool, Survey Monkey. Survey Monkey is a leading source for web-based surveys, offering both ease of use for the customers as well as privacy and security of survey data. Survey Monkey utilizes SSL encryption to keep data secured (“Survey Monkey – About Us,” n.d.). Utilizing Survey Monkey allowed for anonymity for the participants.

Each college was pre-assigned a group number in order to allow the author to identify the supervisor and subordinate associations. The surveys for each paired supervisor and subordinate were numbered by the researcher in Survey Monkey. For example, a supervisor’s survey would be named Group 1.1 and his/her paired subordinate’s survey as Group 1.2, and so on for all groups. Recent research has shown that the LMX scores of supervisors and their subordinates must be analyzed as a dyadic relationship in order to have a more accurate model for correlating LMX quality to job satisfaction (Cogliser et al., 2009). Upon completion of the surveys, the author randomly assigned letters to the numbered groups to allow for continued anonymity upon analysis of the results.

Statistical Treatment

Several analyses were performed on the sets of data using both Spearman’s correlation and non-statistical comparisons. The results of each correlation determined the relationship between the variables in each grouping (e.g., LMX quality and job satisfaction). For all analyses, the relationship is deemed statistically significant at the .05

level ($p < .05$). Spearman's correlation was utilized instead of Pearson's correlation due to the ordinal data collected and small, total sample size ($n=44$).

Summary

A convenience sample of staff at a large suburban university completed two surveys: one to gauge the quality of the LMX relationship with their supervisor or subordinates and the other to assess their own job satisfaction. The data were collected through Survey Monkey and analyzed using both Spearman's correlation and non-statistical comparisons based on the surveys' valuations from the literature.

IV. RESULTS

This study has introduced the variable of supervisor job satisfaction and its relationship with LMX quality to the literature. A convenience sampling of supervisors and their subordinates completed a survey to assess the LMX quality of their relationship as well as their individual job satisfaction. Upon analysis of the responses through the use of both a Spearman's correlation and non-statistical comparisons, the researcher will be able to either accept or reject the null hypothesis which states that there is no relationship between the LMX quality and job satisfaction of subordinates or supervisors.

Demographic Descriptive Statistics

Participants included 22 pairs, each group including a supervisor (SP; n=22) and his/her subordinate (SB; n=22). Each of the 44 participants completed both the LMX and JSS surveys. Each supervisor and subordinate survey was labeled by alpha nomenclature in place of the previously assigned group number (e.g., Group 1.1 became Group SPM) in order for the researcher to analyze the responses for each supervisor/subordinate pairing. For all analyses, a relationship was deemed statistically significant at the .05 level ($p < .05$).

Results of Testing the Research Hypotheses

Summary of results of research question 1

Both a non-statistical comparison and Spearman's correlation were used to assess the first research question: Is there a relationship between LMX quality and job satisfaction for the subordinate? To interpret the LMX results, the scores of each LMX-7

question were totaled and the total indicated the quality of the relationship: 30-35 = very high; 25-29 = high; 20-24 = moderate; 15-19 = low; and 7-14 = very low (Graen & Uhl-Bien, 1995). Similarly, to interpret the results of the 36-items on the JSS, all of the scores were totaled and the total indicated whether the participant was satisfied (144 to 216), dissatisfied (36 to 108), or ambivalent (108 to 144; Spector, 1997).

For each subordinates' paired survey responses, a relationship was evaluated as 'yes' if the valuations for both LMX and JSS were comparable (e.g., LMX=high and JSS=satisfied; LMX=low and JSS=dissatisfied). A 'no' was assigned if the valuations for both LMX and JSS were not comparable (e.g., LMX=high and JSS=dissatisfied). An 'inconclusive' was assigned if there was not a distinct comparison/difference in the valuations for both LMX and JSS (e.g., LMX=moderate and JSS=satisfied). For the subordinates' responses, there was a frequency of seventeen at 'yes,' a frequency of one at 'no,' and a frequency of four at 'inconclusive' (Table 2).

In regards to Spearman's correlation, a relationship is deemed significant at the .05 level ($p < .05$). A Spearman's correlation of the paired subordinates' LMX and JSS responses was conducted instead of a Pearson's correlation due to the data being ordinal as well as the small sample size ($n=22$). The p -value for this analysis is .00023, thus there is a relationship between LMX quality and job satisfaction for subordinates (Table 3). The scatterplot (Figure 1) indicates that there is a strong, linear relationship between subordinate LMX and JSS scores. The correlation coefficient (a.k.a., r -value) for this relationship is .68, evidence of a medium strong relationship between the two variables. The results of the subordinate LMX and JSS correlation show a large range in LMX

scores, which will be further discussed in the next chapter. The results of the correlation allow the researcher to reject the null hypothesis and accept hypothesis 1.

Table 2

Non-statistical Comparison of Subordinate LMX and JSS Responses

Group ID	Survey Responses for Subordinates (SB)				Comparable Valuation Relationship
	LMX	JSS	LMX	JSS	
A	29	149	high	satisfied	yes
B	30	195	very high	satisfied	yes
C	35	148	very high	satisfied	yes
D	18	109	low	ambivalent	<i>inconclusive</i>
E	34	165	very high	satisfied	yes
F	23	154	moderate	satisfied	<i>inconclusive</i>
G	28	152	high	satisfied	yes
H	31	168	very high	satisfied	yes
I	32	184	very high	satisfied	yes
J	26	143	high	ambivalent	<i>inconclusive</i>
K	26	163	high	satisfied	yes
L	26	159	high	satisfied	yes
M	26	128	high	ambivalent	<i>inconclusive</i>
N	16	105	low	dissatisfied	yes
O	22	121	moderate	ambivalent	yes
P	35	178	very high	satisfied	yes
Q	33	164	very high	satisfied	yes
R	35	194	very high	satisfied	yes
S	34	187	very high	satisfied	yes
T	33	163	very high	satisfied	yes
U	33	190	very high	satisfied	yes
V	29	106	high	dissatisfied	no

Note. n=22

Table 3

Subordinate LMX and JSS Data

Subordinates		
Group ID	LMX	JSS
A	29	149
B	30	195
C	35	148
D	18	109
E	34	165
F	23	154
G	28	152
H	31	168
I	32	184
J	26	143
K	26	163
L	26	159
M	26	128
N	16	105
O	22	121
P	35	178
Q	33	164
R	35	194
S	34	187
T	33	163
U	33	190
V	29	106

Note. The correlation between JSS and LMX is significant at the .05 level ($p < .05$). ($r = .68$; $p = .00023$)

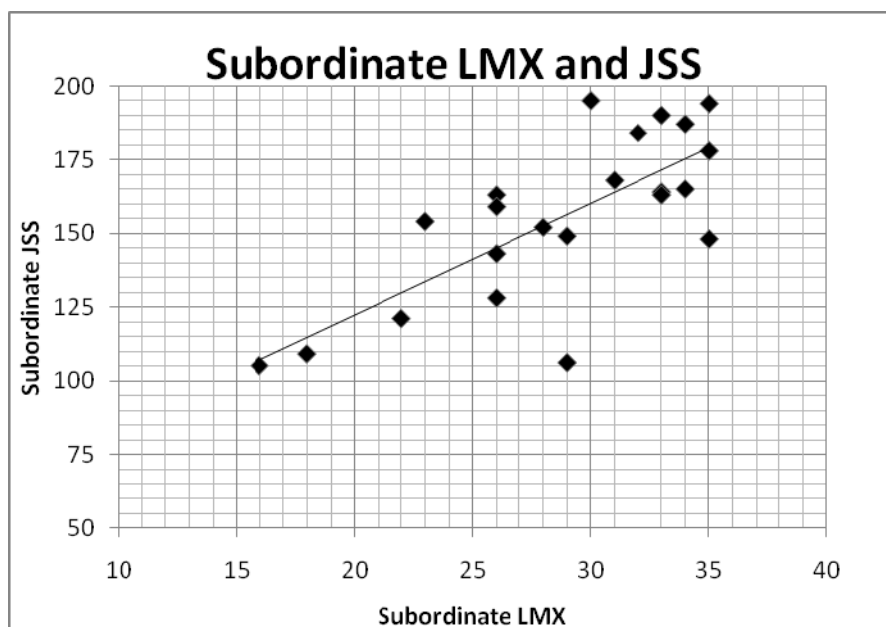


Figure 1. Scatterplot of subordinate LMX and JSS responses. ($r = .68$; $p = .00023$)

Summary of results of research question 2

Both a non-statistical comparison and Spearman's correlation were used to assess the second research question: Is there a relationship between LMX quality and job satisfaction for the supervisor? To interpret the results of LMX, the scores of each LMX-7 question were totaled and the total indicated the quality of the relationship: 30-35 = very high; 25-29 = high; 20-24 = moderate; 15-19 = low; and 7-14 = very low (Graen & Uhl-Bien, 1995). Similarly, to interpret the results of the 36-items on the JSS, all of the scores were totaled and the total indicated whether the participant was satisfied (144 to 216), dissatisfied (36 to 108), or ambivalent (108 to 144; Spector, 1997).

For each supervisors' paired survey responses, a relationship was evaluated as 'yes' if the valuations for both LMX and JSS were comparable (e.g., LMX=high and JSS=satisfied). A 'no' was assigned if the valuations for both LMX and JSS were not comparable (e.g., LMX=high and JSS=dissatisfied). An 'inconclusive' was assigned if

there was not a distinct comparison/difference in the valuations for both LMX and JSS (e.g., LMX=moderate and JSS=satisfied). For the supervisors' responses, there was a frequency of nineteen at 'yes' and a frequency of three at 'inconclusive' (Table 4)

In regards to the Spearman's correlation, a relationship is deemed significant at the .05 level ($p < .05$). A Spearman's correlation of the paired supervisors' LMX and JSS responses was conducted instead of a Pearson's correlation due to the data being ordinal as well as the small sample size ($n=22$). The p -value for this analysis is .00996. The scatterplot (Figure 2) indicates that there is a strong, linear relationship between supervisor LMX and JSS scores. The correlation coefficient for this relationship is .49. The results of the correlation allow the researcher to reject the null hypothesis and accept hypothesis 2.

Table 4

Non-statistical Comparison of Supervisor LMX and JSS Responses

Group ID	Survey Responses for Supervisors (SP)				Comparable Valuation Relationship
	LMX	JSS	LMX	JSS	
A	28	145	high	satisfied	yes
B	32	183	very high	satisfied	yes
C	31	175	very high	satisfied	yes
D	28	144	high	ambivalent	<i>inconclusive</i>
E	31	175	very high	satisfied	yes
F	30	147	very high	satisfied	yes
G	29	189	high	satisfied	yes
H	28	153	high	satisfied	yes
I	32	141	very high	ambivalent	<i>inconclusive</i>
J	33	186	very high	satisfied	yes
K	31	175	very high	satisfied	yes
L	28	153	high	satisfied	yes
M	34	153	very high	satisfied	yes
N	29	117	high	ambivalent	<i>inconclusive</i>
O	26	146	high	satisfied	yes
P	33	180	very high	satisfied	yes
Q	31	176	very high	satisfied	yes
R	31	170	very high	satisfied	yes
S	29	189	high	satisfied	yes
T	33	174	very high	satisfied	yes
U	34	191	very high	satisfied	yes
V	28	145	high	satisfied	yes

Note. n=22

Table 5

Supervisor LMX and JSS Data

Supervisors		
Group ID	LMX	JSS
A	28	145
B	32	183
C	31	175
D	28	144
E	31	175
F	30	147
G	29	189
H	28	153
I	32	141
J	33	186
K	31	175
L	28	153
M	34	153
N	29	117
O	26	146
P	33	180
Q	31	176
R	31	170
S	29	189
T	33	174
U	34	191
V	28	145

Note. The correlation between JSS and LMX is significant at the .05 level ($p < .05$). ($r = .49$; $p = .00996$)

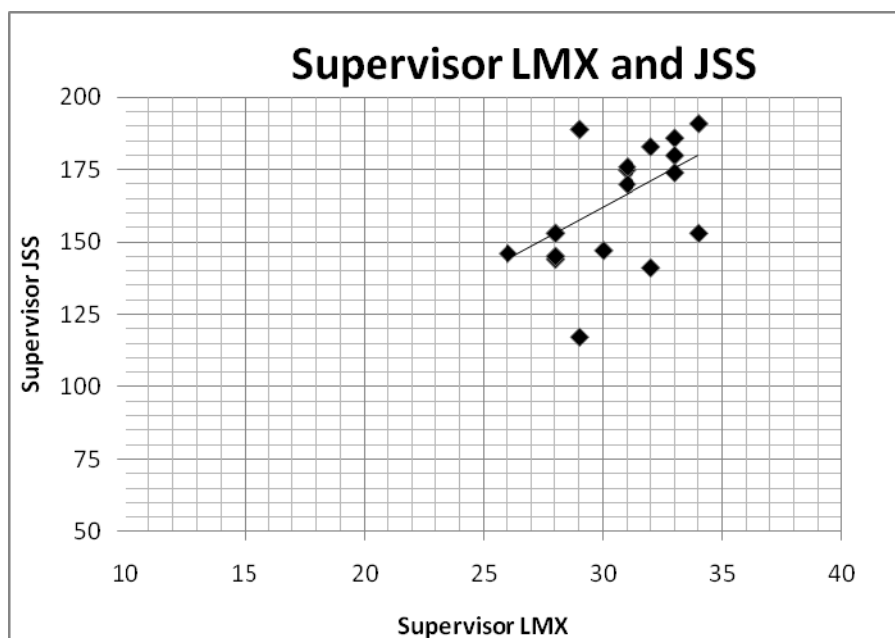


Figure 2. Scatterplot of supervisor LMX and JSS responses. ($r = .49$; $p = .00996$)

Summary of results of research question 3

A Spearman's correlation was conducted to assess the third research question: Is there a relationship between subordinate and supervisor LMX? A Spearman's correlation of the paired supervisor and subordinate LMX responses was utilized instead of a Pearson's correlation due to the results being ordinal data as well as the small sample size ($n=44$). A relationship is deemed significant at the .05 level ($p < .05$). The p -value for this analysis is .03142. The results of the correlation allow the researcher to reject the null hypothesis and accept hypothesis 3.

Based on the subordinate responses, each pair was assigned into an LMX quality grouping: low-quality (total LMX score = 15-19); moderate-quality (total LMX score = 20-24); high-quality (total LMX score = 25-29); or very high-quality (total LMX score = 30-35). There were no pairs in the very low-quality group (total LMX score = 7-14). The differences in scores were taken by subtracting the supervisor score from his/her paired

subordinate's score. Further analysis related to the differences in LMX scores will be discussed in the following chapter.

The scatterplot indicates that there is a linear relationship between supervisor and subordinate LMX scores (Figure 3). The correlation coefficient (r -value) for this relationship is .40. Further discussion related to the low correlation coefficient will be discussed in the next chapter.

Table 6

Data Ordered by LMX Quality

LMX Quality		
Subordinate (SB)	Supervisor (SP)	Difference
Low-quality (score = 15-19)		
16	29	-13
18	28	-10
Moderate-quality (score = 20-24)		
22	26	-4
23	30	-7
High-quality (score = 25-29)		
26	33	-7
26	31	-5
26	28	-2
26	34	-8
28	29	-1
29	28	1
29	28	1
Very high-quality (score = 30-35)		
30	32	-2
31	28	3
32	32	0
33	31	2
33	33	0
33	34	-1
34	31	3
34	29	5
35	31	4
35	33	2
35	31	4

Note. Total n=44

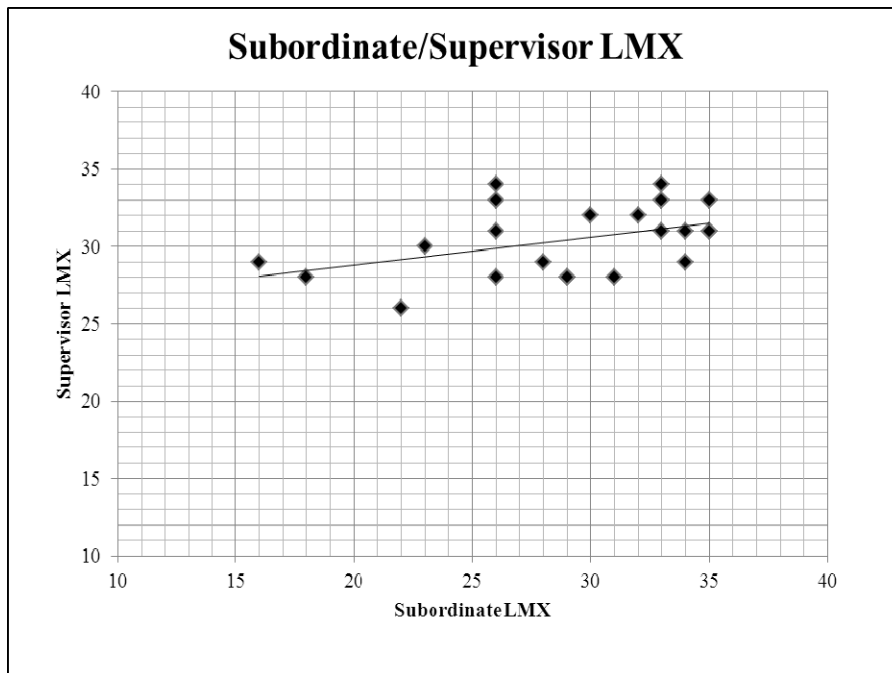


Figure 3. Scatterplot of subordinate and supervisor LMX responses. ($r = .40$; $p = .03142$)
*significant at the .05 level ($p < .05$)

Summary of results of research question 4

A Spearman's correlation was conducted to assess the fourth research question: Is there a relationship between subordinate and supervisor job satisfaction? A Spearman's correlation of the paired supervisor and subordinate JSS responses was utilized instead of a Pearson's correlation due to the data being ordinal as well as the small sample size ($n=44$). A relationship is deemed significant at the .05 level ($p < .05$). The p -value for this analysis is .00591. The results of the correlation allow the researcher to reject the null hypothesis and accept hypothesis 4.

Based on the subordinate responses, each pair was assigned a job satisfaction grouping: dissatisfied (total score = 36-108); ambivalent (total score = 108-144); or satisfied (total score = 144-216). The differences in scores were taken by subtracting the

supervisor score from his/her paired subordinate's score. Further analysis related to the differences will be discussed in the following chapter.

Each of the nine facets of the JSS survey (Table 8) were analyzed by calculating the percentage of subordinates and supervisors satisfied with a particular item (total item score = 16-24) versus those dissatisfied and/or ambivalent (total item score = 4-12; total item score = 12-16, respectively). Both subordinates (SB) and supervisors (SP) seem consistently satisfied with 'supervision' (SB=95.5%; SP=95.5%), 'fringe benefits' (SB=81.8%; SP=77.3%), 'contingent rewards' (SB=72.7%; SP=86.4%), and 'coworkers' (SB=77.3%; SP=90.9%). Both groups were also comparably dissatisfied with 'promotions' at work (SB=72.7%; SP=81.8%). The facet with the largest difference was 'communication,' with 59.1% of subordinates satisfied as opposed to 90.1% of supervisors satisfied.

Table 7

Data Ordered by Level of Job Satisfaction

Job Satisfaction		
Subordinate (SB)	Supervisor (SP)	Difference
Dissatisfied (score = 36-108)		
105	117	-12
106	145	-39
Ambivalent (score = 108-144)		
109	144	-35
121	146	-25
128	153	-25
143	186	-43
Satisfied (score = 144-216)		
148	175	-27
149	145	4
152	189	-37
154	147	7
159	153	6
163	175	-12
163	174	-11
164	176	-12
165	175	-10
168	153	15
178	180	-2
184	141	43
187	189	-2
190	191	-1
194	170	24
195	183	12

Note. Total n=44

Table 8

Percentage of Satisfied and Dissatisfied/Ambivalent for JSS Facets

Facet	Satisfied	Dissatisfied/ Ambivalent
Pay		
SB	45.5%	54.5%
SP	72.7%	27.3%
Promotion		
SB	27.3%	72.7%
SP	18.2%	81.8%
Supervision		
SB	95.5%	4.5%
SP	95.5%	4.5%
Fringe Benefits		
SB	81.8%	18.2%
SP	77.3%	22.7%
Contingent Rewards		
SB	72.7%	27.3%
SP	86.4%	13.6%
Operating Conditions		
SB	54.5%	45.5%
SP	45.5%	54.5%
Coworkers		
SB	77.3%	22.7%
SP	90.9%	9.1%
Nature of Work		
SB	95.5%	4.5%
SP	95.5%	4.5%
Communication		
SB	59.1%	40.9%
SP	90.1%	9.1%

Note. Subordinate = SB; Supervisor = SP

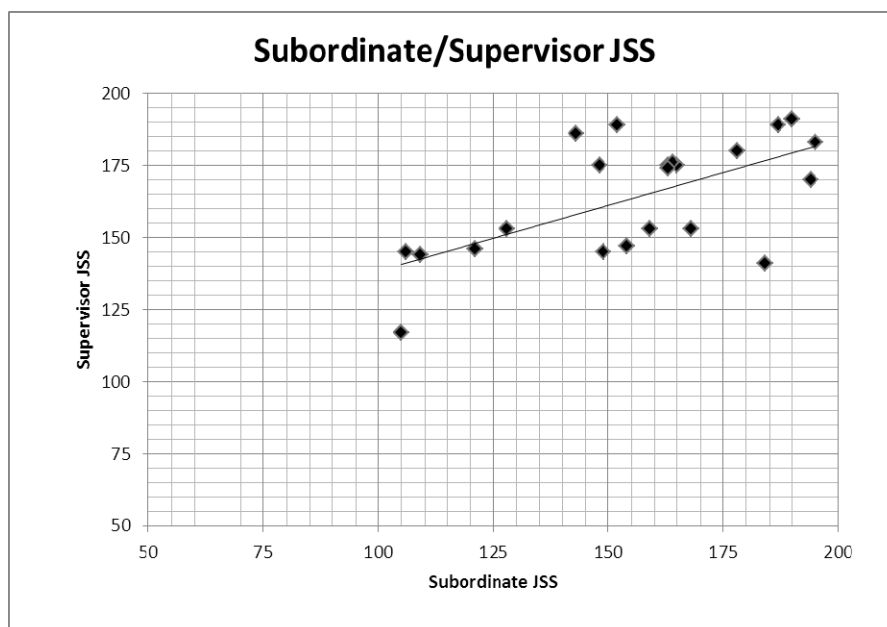


Figure 4. Scatterplot of subordinate and supervisor JSS responses. ($r = .53$; $p = .00591$)
 *significant at the .05 level ($p < .05$)

Summary

As there are over 2,000 employees at the institution in this study, there were only 44 participants. Participants reflect a representative sampling of the colleges studied. The data were analyzed to determine the relationship between: (1) subordinate LMX quality and job satisfaction; (2) supervisor LMX quality and job satisfaction; (3) subordinate and supervisor LMX quality; and (4) subordinate and supervisor job satisfaction. Significant correlations were found at the .05 level ($p < .05$) in all four conditions. The analyses of these research hypotheses concluded the researcher can reject the null hypothesis and accept the hypotheses that there is a relationship between LMX quality and job satisfaction. Further analysis regarding the significance of each research hypotheses' results will be discussed in the following chapter.

V. CONCLUSIONS, IMPLICATIONS, AND SUMMARY

This non-experimental, correlation study focuses on both the relationship between subordinate LMX quality and job satisfaction, as well as introduces the non-traditional focus of assessing this same relationship for supervisors. There is an abundance of research that supports the research hypotheses in this study related to the correlation between LMX quality and subordinate job satisfaction. Likewise, there is a comparable absence in the literature relating LMX quality to job satisfaction for supervisors. This study utilized a convenience sampling in a large suburban university: 22 pairs of supervisors (n=22) and their subordinates (n=22) from 20 departments. Each participant completed two surveys: one to gauge the quality of the LMX relationship with his/her supervisor or subordinates and the other to assess his/her own job satisfaction. The data were collected through the use of an online questionnaire tool, Survey Monkey, and were analyzed using both Spearman's correlation and non-statistical comparison. Upon analysis of the data, the researcher was able to reject the null hypothesis because the results show that there is a relationship between LMX quality and job satisfaction.

Conclusions

The focus on the relationship between supervisor LMX quality and job satisfaction was introduced into the literature through this study. Upon analysis, a significant correlation was found between supervisor LMX quality and job satisfaction, offering support for the acceptance of hypothesis 2. Prior studies relating LMX to variables such as job satisfaction tended to focus exclusively on subordinate samplings

(cf. Cogliser et al., 2009). Upon analysis of the JSS facets, 90.9% of supervisors were satisfied with their 'coworkers,' and 90.1% were satisfied with 'communication' at work. By studying the individual facets included in the JSS one can ascertain that supervisors, like subordinates, are satisfied with their relationships at work and tend to be dissatisfied with elements such as 'promotions' (81.8%) and 'operating conditions' (54.5%); both facets being outside the realm of their direct LMX relationships. The non-statistical comparison of each supervisor's LMX and JSS responses concluded that 86% of the pairings had a comparable valuation relationship (e.g., high LMX correlated with job satisfaction) that is slightly higher than the 77% comparison for subordinates. This baseline research allows for future research to focus more exclusivity on both LMX and job satisfaction of supervisors.

Though there was a significant correlation between supervisor and subordinate job satisfaction, there is insufficient literature to support the results correlating supervisor and subordinate job satisfaction. Likened to LMX research, job satisfaction research has focused solely on subordinates. A review of the responses grouped by the nine job satisfaction facets indicates that both subordinates and supervisors are most satisfied with 'nature of work' and 'supervision' with subordinate and supervisor percentages for both categories being 95.5%. Subordinate dissatisfaction with 'pay' (54.5%) and 'communication' (40.9%) versus supervisor satisfaction with 'pay' (72.7%) and 'communication' (90.1%) may have contributed to the moderate correlation between subordinate and supervisor job satisfaction. Studying the individual facets may provide insight into why there is such a large range in differences between subordinate and supervisors JSS responses (-43 to 43).

A review of total JSS responses indicated that 86% of supervisors are satisfied with their jobs, with the other 14% of supervisors ambivalent to their job satisfaction. The subordinates' JSS responses indicated that 73% are satisfied with their jobs, 18% are ambivalent and 9% are dissatisfied. As there is dearth in the literature related to comparing supervisor and subordinate job satisfaction, this baseline research allows for future research to focus more exclusively on this correlation.

Though there was a moderate correlation found between subordinate and supervisor LMX, this correlation has the most support in the literature. Research has consistently found that subordinate descriptions of LMX quality tend to moderately correlate with their supervisors' descriptions (Gerstner & Day, 1997). Zhou and Schriesheim (2010) asserted that supervisors evaluate their LMX relationships differently from their subordinates because they tend to focus on different facets of the leader-member exchange to form their perceptions (e.g., economic versus social). Supervisors tend to form their perceptions from task-related aspects whereas subordinates form their perceptions from the social elements that may affect their LMX relationship (Dienesch & Liden, 1986; Zhou & Schriesheim, 2009).

A review of all supervisors' LMX responses indicated that 41% are in a high-quality relationship, with the other 59% of supervisors in very high-quality relationship. Only 32% of subordinates' LMX responses indicated that they were in a high-quality relationship, with 50% of subordinates' LMX responses indicating membership in a very high-quality relationship. The differences between subordinate and supervisor LMX scores range from -13 to 5. Because no information was collected regarding either supervisor or subordinate perceptions, one must take into account the confounding

variables that may have impacted both the subordinate and supervisor scores. These results, and specifically the low correlation coefficient for research question 3, suggest an instrument weakness of the LMX-7 Short Form and give further credence to current LMX research calling for the relationship to be studied using separate constructs (Brower et al., 2000).

The results related to the correlation between LMX quality and job satisfaction of subordinates are also strongly supported throughout the literature. A meta-analysis by Gerstner and Day (1997) indicated that high-quality LMX relationships are significantly related to higher levels of job satisfaction. Likewise, low-quality LMX relationships have been correlated with job dissatisfaction (cf. Gerstner & Day, 1997). Research utilizing the LMX-7 Short Form and the Minnesota Satisfaction Questionnaire to compare LMX quality and subordinate job satisfaction found that there is a significant correlation between the two variables (Stringer, 2006; Coglisier et al., 2009). The results of the correlation between LMX quality and subordinate job satisfaction produced the most significant *p*- and *r*-values in this study. The non-statistical comparison of each subordinate's LMX and JSS responses concluded that 77% of the pairings had a comparable valuation relationship (e.g., high LMX correlated with job satisfaction). Thus, the non-statistical comparison is supported by the statistical treatment of the subordinate LMX and job satisfaction data. Additionally, when the facet of 'supervision' was analyzed, 95.5% of subordinates were satisfied with this element of their job—again supporting the results that there is a correlation between LMX quality and job satisfaction.

Limitations

The main limitation of this study was the population and sample size. A single institution of higher education was selected for the population and only 44 employees participated in the study. Another limitation is related to the interpretations of the LMX responses and results. The understanding of the correlation between subordinate and supervisor LMX scores would have benefited from follow-up interviews specifically focused on the perceptions that may have influenced how individuals answered the LMX survey.

Implications

This study offers further credence to the literature on LMX quality and job satisfaction for subordinates, as well as introduces the variable of supervisor job satisfaction to both LMX and job satisfaction research. The following are recommendations for further research and application of the results.

Recommendation 1

Future studies in LMX and job satisfaction research should focus more attention on supervisors. This study offers a baseline for the correlation between supervisor LMX and job satisfaction. Further research should be conducted amongst supervisors in different industry populations, with a larger sample size. Follow-up interviews with select supervisors who scored low, moderate, and high on LMX quality would support the current strand of LMX research focusing on the implications of perception on LMX ratings.

Recommendation 2

The importance of the LMX relationship is supported in this study. Though the variable of leadership development training was not discussed in this research, the importance of LMX relationships should be shared with supervisors in a formalized capacity. The correlation between LMX quality and job satisfaction for both subordinates and supervisors is beneficial not only to the individual but also to the work unit and ultimately to the organization as whole—supported exclusively in the literature. LMX quality and the variable of formalized leadership development training for supervisors should be analyzed in future research. An overview of leadership development research by Day (2001) offers a basis for future research assessing the impact of leadership training on organizations. Administering the LMX survey before and after leadership training would help gauge the impact on supervisor perceptions of their LMX relationships.

Recommendation 3

The results of this study support the need for the development of separate LMX survey constructs. Upon development and validation of these instruments, future research could compare subordinate and supervisor responses to the LMX-7 Short Form (the version used in this study) versus the results of newly developed instruments. Even with the development of role-specific surveys, further questioning and analysis of the perceptions that impact LMX quality should still be taken into consideration.

Summary

The purpose of this study was to examine further the relationship between LMX quality and job satisfaction of subordinates as well as to introduce to the literature the

variable of supervisor job satisfaction and its correlation to LMX quality to the literature. This non-experimental, correlational study focused on the analysis of 22 pairs of supervisor and subordinate LMX and job satisfaction survey responses. The data were analyzed to determine the relationship between: (1) subordinate LMX quality and job satisfaction; (2) supervisor LMX quality and job satisfaction; (3) paired subordinate and supervisor LMX quality; and (4) subordinate and supervisor job satisfaction. The analyses of these research hypotheses concluded that there is a relationship between LMX quality and job satisfaction in all four conditions. Future research should be conducted to offer further credibility to the findings specifically related to the correlation between supervisor LMX quality and job satisfaction as well as to the correlation between subordinate and supervisor job satisfaction. Additional research should also include the impact of leadership development training on the quality of LMX relationships.

REFERENCES

- Aditya, R.N. (2004). Leadership. In M. Hersen (Ed.), *Comprehensive handbook of psychological assessment*(pp. 216-242). Hoboken, NJ: John Wiley & Sons.
- Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.
- Bouty, I. (2000). Interpersonal and interaction influences on informal resource exchanges between R&D researchers across organizational boundaries. *Academy of Management Journal*, 43, 50-65.
- Brower, H. H., Schoorman, F. D., & Tan, H. H. (2000). A model of relational leadership: The integration of trust and leader-member exchange. *The Leadership Quarterly*, 11, 227-250.
- Burke, R. J., & Fiksenbaum, L. (2009). Work motivations, satisfactions, and health among managers: Passion versus addition. *Cross-Cultural Research*, 43(4), 349-365.
- Byrne, D. (1971). *The attraction paradigm*. San Diego, CA: Academic Press.
- Cogliser, C. C., Schriesheim, C. A., Scandura, T. A., & Gardner, W. L. (2009). Balance in leader and follower perceptions of leader-member exchange: Relationships with performance and work attitudes. *The Leadership Quarterly*, 20, 452-465.
- Dansereau, F., Graen, G. B., & Haga, W. (1975). A vertical dyad linkage approach to leadership in formal organizations. *Organizational Behavior and Human Performance*, 13, 46-78.
- Day, D. V. (2001). Leadership development: A review in context. *Leadership Quarterly*, 11(4), 581-631.
- Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analysis review of experiments

examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125, 627-668.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.

Dienesch, R. M., & Liden, R. C. (1986). Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review*, 11(3), 618-634.

Erdogan, B., & Liden, R. C. (2002). Social exchanges in the workplace: A review of recent developments and future research directions in leader-member exchange theory. In L. L. Neider & C. A. Schriesheim (Eds.), *Leadership* (pp. 65-114). Greenwich, CT: Information Age Publishing.

Gerstner, C. R., & Day, D. V. (1997). Meta-analytic review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology*, 82, 827-844.

Graen, G. B. (1976). Role-making processes within complex organizations. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1201-1245). Chicago: Rand McNally.

Graen, G. B., Novak, M. A., & Sommerkamp, P. (1982). The effects of leader-member exchange and job design on productivity and satisfaction: Testing a dual attachment model. *Organizational Behavior and Human Performance*, 30, 109-131.

- Graen, G. B., & Scandura, T. A. (1987). Toward a psychology of dyadic organizing. *Research in Organizational Behavior*, 9, 175-208.
- Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly*, 6(2), 219-247.
- Greguras, G. J., & Ford, J. M. (2006). An examination of the multidimensionality of supervisor and subordinate perceptions of leader-member exchange. *Journal of Occupational of Organizational Psychology*, 79, 433-465.
- Harris, K. J., Wheeler, A. R., & Kacmar, K. M. (2009). Leader-member exchange and empowerment: Direct and interactive effects on job satisfaction, turnover intentions, and performance. *The Leadership Quarterly*, 20, 371-382.
- Hewlett, S. A., & Luce, C. B. (2006). Extrinsic jobs: The dangerous allure of the 70-hour work week. *Harvard Business Review*, 84(12), 49-59.
- Hollander, E. P., & Offermann, L. R. (1990). Power and leadership in organizations: Relationships in transition. *American Psychologist*, 45, 179-189.
- Hom, P. W., Katerberg, R., Jr., & Hulin, C. L. (1979). Comparative examination of three approaches to the predication of turnover. *Journal of Applied Psychology*, 64, 280-290.
- Jablin, F. M. (1987). Organizational entry, assimilation, and exit. In F. M. Jablin, L. L. Putnam, K. H. Roberts, & L. W. Porter (Eds.), *Handbook of organizational communication* (pp. 679-740). Newbury Park, CA: Sage.
- Krackhardt, D. (1990). Assessing the political landscape: Structure, cognition, and power

- in organizations. *Administrative Science Quarterly*, 35, 342-369.
- Liden, R. C., & Maslyn, J. M. (1998). Multidimensionality of leader-member exchange: An empirical assessment through scale development. *Journal of Management*, 24(1), 43-72.
- Liden, R. C., Sparrowe, R. T., & Wayne, S. J. (1997). Leader-member exchange theory: The past and potential for the future. *Research in personnel and human resources management*, 15, 47-119.
- Liden, R. C., Wayne, S. J., & Stilwell, D. (1993). A longitudinal study on the early development of leader-member exchanges. *Journal of Applied Psychology*, 78(4), 662-674.
- Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297-1349). Chicago: Rand McNally.
- Keys, J. B., & Wolfe, J. (1988). Management education and development: Current issues and emerging trends. *Journal of Management*, 16, 307-336.
- Mardanov, I. T., Heischmidt, K., & Henson, A. (2008). Leader-member exchange and job satisfaction bond and predicted employee turnover. *Journal of Leadership & Organizational Studies*, 15(2), 159-175.
- Maslyn, J. M., & Uhl-Bien, M. (2001). Leader-member exchange and its dimensions: Effects of self-effort and other's effort on relationship quality. *Journal of Applied Psychology*, 86, 697-708.
- Merton, R. K. (1948). The self-fulfilling prophecy. *The Antioch Review*, 8, 193-210.

- Muijs, D., Harris, A., Lumby, J., Morrison, M., & Sood, K. (2006). Leadership and leadership development in highly effective further education providers. Is there a relationship? *Journal of Further and Higher Education*, 30(1), 87-106.
- Porter, L. W. (1962). Job attitudes in management: I. Perceived deficiencies in need fulfillment as a function of job level. *Journal of Applied Psychology*, 46, 375-384.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Scandura, T. A., & Schriesheim, C. A. (1994). Leader-member exchange and supervisor career mentoring as complementary constructs in leadership research. *Academy of Management Journal*, 37, 1588-1602.
- Schriesheim, C. A., Castro, S. L., Zhou, X., & Yammarino, F. J. (2001). The folly of theorizing "A" but testing "B": A selective level-of-analysis review of the field and a detailed leader-member exchange illustration. *Leadership Quarterly*, 12, 515-551.
- Smith, P. C., Kendall, L. M., & Hulin, C. L. (1969). *Measurement of satisfaction in work and retirement*. Chicago: Rand McNally.
- Sparrowe, R. T., & Liden, R. C. (1997). Process and structure in leader-member exchange. *Academy of Management Review*, 22, 522-552.
- Spector, P. (1985). Measurement of human service staff satisfaction: Development of the job satisfaction survey. *American Journal of Community Psychology*, 13(6), 693-713.
- Spector, P. (1997). *Job satisfaction: Application, assessment, causes, and consequences*.

Thousand Oaks, CA: Sage Publications.

Srivastava, A., Locke, E. A., & Bartol, K. M. (2001). Money and subjective well-being:

It's not the money, it's the motives. *Journal of Personality and Social Psychology*, 80, 959-971.

Stringer, L. (2006). The link between the quality of the supervisor-employee relationship and the level of the employee's job satisfaction. *Public Organization Review*, 6, 125-142.

Survey Monkey – About Us (n.d.). Retrieved from

<http://www.surveymonkey.com/AboutUs.aspx>

Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, 41, 464-476.

Van Breukelen, W., Konst, D., & Van Der Vlist, R. (2002). Effects of LMX and differential treatment on work unit commitment. *Psychological Reports*, 91, 220-230.

Vecchio, R. P. (1986). Are you in or out boss? *Business Horizons*, 29, 76-78.

Vecchio, R. P. (1995). It's not easy being green: Jealous and envy in the workplace. In G. R. Ferris (Ed.), *Research in personnel and human resources management*, Vol. 13 (pp.201-244). Stamford, CT: JAI Press.

Vecchio, R. P., & Gobdel, B. C. (1984). The vertical dyad linkage model of leadership: Problems and prospects. *Organizational Behavior and Human Performance*, 34, 5-20.

Vecchio, R. P., Griffith, R. W., & Hom, P. W. (1986). The predictive utility of the vertical dyad linkage approach. *Journal of Social Psychology*, 126, 617-625.

- Wolfe, M. G. (1970). Need gratification theory: A theoretical reformulation of job satisfaction/dissatisfaction and job motivation. *Journal of Applied Psychology*, 54, 87-94.
- Zhou, X., & Schriesheim, C. A. (2009). Supervisor-subordinate convergence in descriptions of leader-member exchange (LMX) quality: Review and testable propositions. *The Leadership Quarterly*, 20, 920-932.
- Zhou, X., & Schriesheim, C. A. (2010). Quantitative and qualitative examination of propositions concerning supervisor-subordinate convergence in descriptions of leader-member exchange (LMX) quality. *The Leadership Quarterly*, 21, 826-843.

Appendix A

LMX-7 Short Form

LMX 7 Questionnaire				
1. Do you know where you stand with our leader (follower)...[and] do you usually know how satisfied your leader (follower) is with what you do?				
Rarely 1	Occasionally 2	Sometimes 3	Fairly often 4	Very often 5
2. How well does your leader (follower) understand your job problems and needs?				
Not a bit 1	A little 2	A fair amount 3	Quite a bit 4	A great deal 5
3. How well does your leader (follower) recognize your potential?				
Not at all 1	A little 2	Moderately 3	Mostly 4	Fully 5
4. Regardless of how much formal authority he or she has built into his or her position, what are the chances that your leader (follower) would use his or her power to help you solve problems in your work?				
None 1	Small 2	Moderate 3	High 4	Very high 5
5. Again, regardless of the amount of formal authority your leader (follower) has, what are the chances that he or she would “bail you out” at his or her expense?				
None 1	Small 2	Moderate 3	High 4	Very high 5
6. I have enough confidence in my leader (follower) that I would defend and justify his or her decision if he or she were not present to do so.				
Strongly disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly agree 5
7. How would you characterize your working relationship with your leader (follower)?				
Extremely ineffective 1	Worse than average 2	Average 3	Better than average 4	Extremely effective 5

Appendix B

Subject Re: Permission to use LMX-7 form
From Mary Uhl-Bien <mary.uhlbien@gmail.com>
Date Monday, November 15, 2010 12:09 pm
To Colleen Hayden <colleen.hayden@wright.edu>

Yes, it is a published measure (in Graen and Uhl-Bien, 1995) so you are free to use it. All the best with your research!

Mary

On Mon, Nov 15, 2010 at 9:09 AM, Colleen Hayden

<colleen.hayden@wright.edu> wrote:

> Hello Dr. Uhl-Bien,

>

> My name is Colleen Hayden and I am working on my master's in Leadership

> Development at Wright State University, Dayton, Ohio. My thesis topic is,

> "The relationship between leader-member exchange and job satisfaction:

> Measuring LMX quality and job satisfaction of supervisors and

> subordinates." I am requesting permission to utilize the LMX-7 short form

> (Graen & Uhl-Bien, 1995) to study the variable of LMX quality. I have to

> apply for approval through the Institutional Review Board at my

> institution thus request that you response to this email regarding

> permission to use the LMX-7 short form.

>

> Thank you,

>

> Colleen Hayden

> Medical Education Administrator

> WSU Department of Medicine

> 128 E Apple Street, 2nd Floor

> Dayton, OH 45409-2902

> Phone: 937 208-2936

> Fax: 937 208-2621

> Email: colleen.hayden@wright.edu

> ---

> "Those who stand for nothing fall for anything."

> Alexander Hamilton

>

>

--

Mary Uhl-Bien, Ph.D.

Professor and Howard Hawks Chair in Business Ethics and Leadership

Department of Management

University of Nebraska

Lincoln, NE 68588-0491

mbien2@unl.edu

Appendix C

Job Satisfaction Survey

JOB SATISFACTION SURVEY Paul E. Spector Department of Psychology University of South Florida <small>Copyright Paul E. Spector 1994, All rights reserved.</small>							
PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.		Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much					
1	I feel I am being paid a fair amount for the work I do.	1	2	3	4	5	6
2	There is really too little chance for promotion on my job.	1	2	3	4	5	6
3	My supervisor is quite competent in doing his/her job.	1	2	3	4	5	6
4	I am not satisfied with the benefits I receive.	1	2	3	4	5	6
5	When I do a good job, I receive the recognition for it that I should receive.	1	2	3	4	5	6
6	Many of our rules and procedures make doing a good job difficult.	1	2	3	4	5	6
7	I like the people I work with.	1	2	3	4	5	6
8	I sometimes feel my job is meaningless.	1	2	3	4	5	6
9	Communications seem good within this organization.	1	2	3	4	5	6
10	Raises are too few and far between.	1	2	3	4	5	6
11	Those who do well on the job stand a fair chance of being promoted.	1	2	3	4	5	6
12	My supervisor is unfair to me.	1	2	3	4	5	6
13	The benefits we receive are as good as most other organizations offer.	1	2	3	4	5	6
14	I do not feel that the work I do is appreciated.	1	2	3	4	5	6
15	My efforts to do a good job are seldom blocked by red tape.	1	2	3	4	5	6
16	I find I have to work harder at my job because of the incompetence of people I work with.	1	2	3	4	5	6
17	I like doing the things I do at work.	1	2	3	4	5	6

	PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT. Copyright Paul E. Spector 1994, All rights reserved.	Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much
		1 2 3 4 5 6
18	The goals of this organization are not clear to me.	1 2 3 4 5 6
19	I feel unappreciated by the organization when I think about what they pay me.	1 2 3 4 5 6
20	People get ahead as fast here as they do in other places.	1 2 3 4 5 6
21	My supervisor shows too little interest in the feelings of subordinates.	1 2 3 4 5 6
22	The benefit package we have is equitable.	1 2 3 4 5 6
23	There are few rewards for those who work here.	1 2 3 4 5 6
24	I have too much to do at work.	1 2 3 4 5 6
25	I enjoy my coworkers.	1 2 3 4 5 6
26	I often feel that I do not know what is going on with the organization.	1 2 3 4 5 6
27	I feel a sense of pride in doing my job.	1 2 3 4 5 6
28	I feel satisfied with my chances for salary increases.	1 2 3 4 5 6
29	There are benefits we do not have which we should have.	1 2 3 4 5 6
30	I like my supervisor.	1 2 3 4 5 6
31	I have too much paperwork.	1 2 3 4 5 6
32	I don't feel my efforts are rewarded the way they should be.	1 2 3 4 5 6
33	I am satisfied with my chances for promotion.	1 2 3 4 5 6
34	There is too much bickering and fighting at work.	1 2 3 4 5 6
35	My job is enjoyable.	1 2 3 4 5 6
36	Work assignments are not fully explained.	1 2 3 4 5 6

Appendix D

Subject RE: Permission to use JSS in master's thesis
 From "Spector, Paul" <pspector@usf.edu>
 Date Monday, November 15, 2010 10:20 am
 To 'Colleen Hayden' <colleen.hayden@wright.edu>

Dear Colleen:

You have my permission to use the JSS in your research. You can find details about the scale in the Scales section of my website. I allow free use for noncommercial research and teaching purposes in return for sharing of results. This includes student theses and dissertations, as well as other student research projects. Copies of the scale can be reproduced in a thesis or dissertation as long as the copyright notice is included, "Copyright Paul E. Spector 1994, All rights reserved." Results can be shared by providing an e-copy of a published or unpublished research report (e.g., a dissertation).

Thank you for your interest in the JSS, and good luck with your research.

Best,

Paul Spector
 Department of Psychology
 PCD 4118
 University of South Florida
 Tampa, FL 33620
 813-974-0357
 pspector [at symbol] usf.edu
<http://shell.cas.usf.edu/~spector>

From: Colleen Hayden [mailto:colleen.hayden@wright.edu]
Sent: Monday, November 15, 2010 10:02 AM
To: Spector, Paul
Subject: Permission to use JSS in master's thesis
Importance: High

Hello Dr. Spector,

My name is Colleen Hayden and I am working on my master's in Leadership Development at Wright State University, Dayton, Ohio. My thesis topic is, "The relationship between leader-member exchange and job satisfaction: Measuring LMX quality and job satisfaction of supervisors and subordinates." I am requesting permission to utilize the JSS questionnaire to study the variable of job satisfaction. As I have read on your website, I will most definitely send you an electronic copy of my thesis once it is completed in March 2011. I have to apply for approval with the Institutional Review Board at WSU thus request that you response to this email regarding permission to use the JSS questionnaire.

Thank you,

Colleen Hayden

Appendix E



Department of Internal Medicine
Weber Center for Health Education
128 East Apple Street, Second Floor ■ Dayton, OH 45409-2902
Tel 937.208.2010 ■ Fax 937.208.2621
med.wright.edu

The relationship between leader-member exchange and job satisfaction: Measuring LMX quality and job satisfaction of supervisors and subordinates

You are invited to participate in my research study which is hoping to assess if there is a link between your relationship with your subordinates and your own job satisfaction. The results obtained from this study will be used to complete my master's thesis. I, Colleen Hayden, am the principal investigator (PI) in this study and I have an interest in the connection that exists between the relationship between supervisors and their subordinates and job satisfaction.

If you are willing to participate you will need to send me an e-mail indicating your willingness. Once I have received the e-mail, I will send you a web address that will link you to two surveys. I estimate that it will take you approximately 5 minutes to complete the surveys. By completing the surveys you are indicating your consent to participate in this study. It would be very helpful to me if you would complete the surveys within one week of receiving the link.

There are no direct benefits to you for completing the surveys. The only risk to you is if there were to be a breach of confidentiality in the results of the surveys. The surveys ask questions about your satisfaction with your job and your relationships with your subordinates. Both you and your subordinates are being asked to complete these surveys and I will be linking the results in order to analyze the information. In order to insure that the results you provide are kept confidential, I will be taking the following steps:

1. Once I have received surveys from supervisors and employees, I will link them by code and remove and destroy all identifying information. Thus, no one, including myself, will be able to identify who responded to the survey.
2. All survey results will be stored in a password-protected computer or in a locked office at Wright State University, and only my research advisor or I will have access to the surveys.

You are free to terminate your participation in this study at any time. The entire survey must be completed for submission; however, if you are uncomfortable with any question, you do not have to submit the survey. There will be no negative consequences if you choose to not participate, or stop participating at any time.

If you have any questions or concerns related to this study, please contact the principal investigator, Colleen Hayden, at 937-208-2936 or colleen.hayden@wright.edu. You may also contact my faculty advisor, Dr. Suzanne Franco, suzanne.franco@wright.edu. If you have general questions about giving consent or your rights as a research participant in this research study, you can call the Wright State University Institutional Review Board at 937-775-4462.

Sincerely,

Colleen Hayden
Department of Educational Leadership
Wright State University
Dayton, Ohio

December 21, 2010

Appendix F



Department of Internal Medicine
Weber Center for Health Education
128 East Apple Street, Second Floor ■ Dayton, OH 45409-2902
Tel 937.208.2010 ■ Fax 937.208.2621
med.wright.edu

The relationship between leader-member exchange and job satisfaction: Measuring LMX quality and job satisfaction of supervisors and subordinates

You are invited to participate in my research study which is hoping to assess if there is a link between your relationship with your supervisor and your own job satisfaction. The results obtained from this study will be used to complete my master's thesis. I, Colleen Hayden, am the principal investigator (PI) in this study and I have an interest in the connection that exists between the relationship between supervisors and their subordinates and job satisfaction.

If you are willing to participate you will need to send me an e-mail indicating your willingness. Once I have received the e-mail, I will send you a web address that will link you to two surveys. I estimate that it will take you approximately 5 minutes to complete the surveys. By completing the surveys you are indicating your consent to participate in this study. It would be very helpful to me if you would complete the surveys within one week of receiving the link.

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If you have any questions or concerns related to this study, please contact the principal investigator, Colleen Hayden, at 937-208-2936 or colleen.hayden@wright.edu. You may also contact my faculty advisor, Dr. Suzanne Franco, suzanne.franco@wright.edu. If you have general questions about giving consent or your rights as a research participant in this research study, you can call the Wright State University Institutional Review Board at 937-775-4462.

Sincerely,

Colleen Hayden
Department of Educational Leadership
Wright State University
Dayton, Ohio

December 27, 2010